e-LightenCampusDemo3 Project Report

Report Time: 2025-12-19

CONTENTS

CONTENTS

- **Basic Info**
  - Introduction
- **Device**
  - Device List
  - Device Information (excluding APs)
- **Topology**
  - Network Topology
  - Uplink/Downlink Device
- **Configuration**
  - OfficeService Configuration
  - Device Configuration

1. Basic Info

1.1 Introduction

2. Device

2.1 Device List

No.	Type	Model	Description	Quantity
1	Switch	NBF2100S-16GT1SC		2
2	Switch	NBF2100S-8GT1SC-P	Layer 2, 120W	1
3	Switch	NBF5200M-8FS16GT4XS	Layer 3 managed core switch + OLT, PON support; 8 x 100/1000 Mbps SFP/PON ports, 16 x 10/100/1000BASE-T Ethernet ports, and 4 x 10G SFP+ ports; Maximum: 256 ONUs per device, recommended: 160 ONUs per device; Maximum: 32 ONUs per PON port, Recommended: 20 ONUs per PON port; Supports static routing, Layer 3 aggregation, ACL, etc. Manageable via Ruijie Reyee App and Ruijie Cloud	1
4	Switch	NBS3200-24GT4XS	24-Port L2 Managed 10G Switch, 24 Gigabit RJ45 Ports, 4 *10G SFP+ Slots,19-inch Rack-mountable Steel Case	1
5	Gateway	EG1510XS	Rack-mountable 10-port router, providing one 2.5G WAN port, one 1G LAN port, three 2.5G LAN/WAN ports, three 1G LAN/WAN ports, one SFP+ port and one 1G/2.5G/10G SFP port; recommended 1500 concurrent connections, maximum 4 Gbps throughput; cloud remote management supported.	1
6	AP	RAP2260(G)	AX1800 Wi-Fi 6 dual-band Gigabit ceiling mount AP, dual Gigabit LAN uplink ports, built-in antennas, dual-band 2.4GHz/5GHz, 802.11ax, 802.11ac wave2/wave1, up to 1775Mbps access rate per AP; support AP and routing mode, Layer 3 roaming, Reyee unified networking and Ruijie Cloud app management; Support PoE and local power supply (PoE module and DC adapter are sold separately)	2

2.2 Device Information (excluding APs)

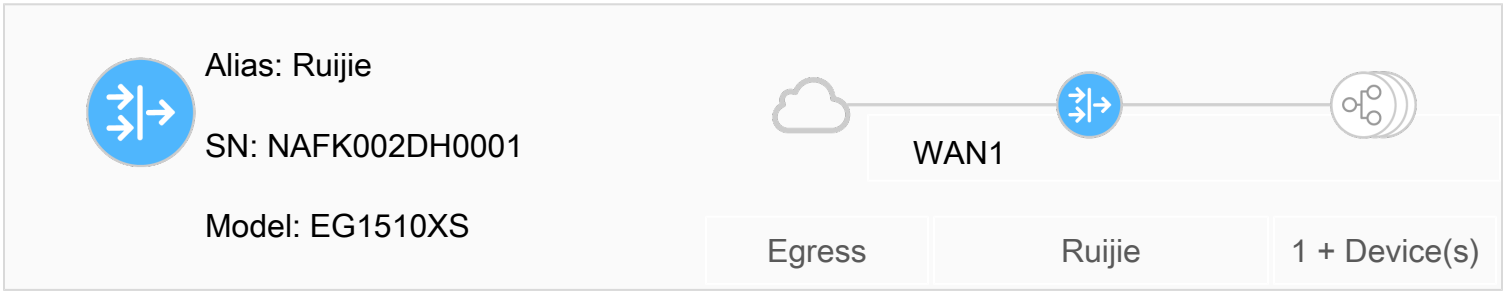
No.	Alias	SN	Model	MAC	IP
1	Ruijie	NAFK002DH0001	EG1510XS	00:D0:F8:00:2D:11	192.168.1.1
2	Ruijie	NAFK002DH0002	NBF5200M-8FS16GT4XS	00:D0:F8:00:2D:20	192.168.1.2
3	Ruijie	NAFK002DH0003	NBS3200-24GT4XS	00:D0:F8:00:2D:30	192.168.1.3
4	Ruijie	NAFK002DH0004	NBF2100S-8GT1SC-P	00:D3:F8:00:2D:42	192.168.1.4
5	Ruijie	NAFK002DH0005	NBF2100S-16GT1SC	00:D3:F8:00:2D:52	192.168.1.5
6	Ruijie	NAFK002DH0008	NBF2100S-16GT1SC	00:D3:F8:00:2D:82	192.168.1.8

3 Topology

3.1 Network Topology

3.2 Uplink/Downlink Device

3.2.1 Uplink/Downlink Devices of Ruijie NAFK002DH0001



Downlink Port	Management IP	Alias	SN	Model
LAN3/WAN4	192.168.1.2	Ruijie	NAFK002DH0002	NBF5200M-8FS16GT4XS

3.2.2 Uplink/Downlink Devices of Ruijie NAFK002DH0002

Alias: Ruijie

SN: NAFK002DH0002

Model: NBF5200M-8FS16GT4XS

Ruijie	Ruijie	3 + Device(s)

Downlink Port	Management IP	Alias	SN	Model
Gi1		Virtual device		
Gi2		Virtual device		
Gi9	192.168.1.3	Ruijie	NAFK002DH0003	NBS3200-24GT4XS

3.2.3 Uplink/Downlink Devices of Virtual device 8243368_134993386

Alias: Virtual device

SN: 8243368_134993386

Model:

Ruijie	Virtual device	1 + Device(s)

Downlink Port	Management IP	Alias	SN	Model
port1	192.168.1.4	Ruijie	NAFK002DH0004	NBF2100S-8GT1SC-P

3.2.4 Uplink/Downlink Devices of Virtual device 8243368_360953382

Alias: Virtual device

SN: 8243368_360953382

Model:

Ruijie	Virtual device	1 + Device(s)

Downlink Port	Management IP	Alias	SN	Model
port1	192.168.1.5	Ruijie	NAFK002DH0005	NBF2100S-16GT1SC

3.2.5 Uplink/Downlink Devices of Ruijie NAFK002DH0004

Alias: Ruijie

SN: NAFK002DH0004

Model: NBF2100S-8GT1SC-P

Virtual device	Ruijie	2 + Device(s)

Downlink Port	Management IP	Alias	SN	Model
Port 1	192.168.1.6	Ruijie	NAFK002DH0006	RAP2260(G)
Port 2	192.168.1.7	Ruijie	NAFK002DH0007	RAP2260(G)

4. Configuration

4.1 Office Service Configuration

4.1.1 Wired Network Planning

Wired Network Planning	IP Range	VLAN	IP Assignment
Default VLAN	192.168.3.0/24	1	Mode：DHCP Source：NAFK002DH0001 Address：192.168.3.1~192.168.3.254 Default Gateway：192.168.3.1 Dns1： Dns2：
PC Network	192.168.161.0/24	161	Mode：DHCP Source：NAFK002DH0001 Address：192.168.161.1~192.168.161.254 Default Gateway：192.168.161.1 Dns1： Dns2：

4.1.2 Wireless Network Planning

Wireless Network Planning	SSID	Password	IP Range	VLAN	IP Assignment
Default VLAN			192.168.3.0/24	1	DHCP
Telecom_Home	Telecom_Home	eeeeeeee	192.168.60.0/24	60	DHCP
Staff Wi-Fi	e-LightenCampusDemo3_Staff	78567171	192.168.63.0/24	63	DHCP
Guest Wi-Fi	e-LightenCampusDemo3_Guest	45784991	192.168.64.0/24	64	DHCP

4.1.3 Office Application

Name	Description
Loop Prevention	Prevent managed switches from causing loops on the port due to hub or mis-connection.
DHCP Snooping	DHCP Snooping can prevent network failure caused by unauthorized routers or DHCP servers.
Smart Flow Control	Limit the network speed of clients flexibly.

4.2 Device Configuration

4.2.1 Gateway Configuration

1) Extranet Configuration

Port	Status	Type	IP	Uplink Bandwidth	Downlink Bandwidth	Remarks
WAN0	Up	DHCP	1.9.241.78	-	-	

2) Intranet Configuration

Port	Status	Type	IP	IP Assignment	Remarks
LAN0	Up	LAN	192.168.3.1/24	Mode:DHCP Address:192.168.3.1~192.168.3.254 Default Gateway:192.168.3.1 Dns1: Dns2: Lease:	
LAN8 /WAN7	Down	LAN	-	Mode: Address: Default Gateway: Dns1: Dns2: Lease:	

LAN1 /WAN6	Down	LAN	192.168.3.1/24	Mode:DHCP Address:192.168.3.1~192.168.3.254 Default Gateway:192.168.3.1 Dns1: Dns2: Lease:	
LAN2 /WAN5	Down	LAN	192.168.3.1/24	Mode:DHCP Address:192.168.3.1~192.168.3.254 Default Gateway:192.168.3.1 Dns1: Dns2: Lease:	
LAN3 /WAN4	Down	LAN	192.168.3.1/24	Mode:DHCP Address:192.168.3.1~192.168.3.254 Default Gateway:192.168.3.1 Dns1: Dns2: Lease:	
LAN4 /WAN3	Down	LAN	192.168.3.1/24	Mode:DHCP Address:192.168.3.1~192.168.3.254 Default Gateway:192.168.3.1 Dns1: Dns2: Lease:	
LAN5 /WAN2	Down	LAN	192.168.3.1/24	Mode:DHCP Address:192.168.3.1~192.168.3.254 Default Gateway:192.168.3.1 Dns1: Dns2: Lease:	
LAN6 /WAN1	Down	LAN	192.168.3.1/24	Mode:DHCP Address:192.168.3.1~192.168.3.254 Default Gateway:192.168.3.1 Dns1: Dns2: Lease:	

LAN7 /WAN8	Down	LAN	192.168.3.1/24	Mode:DHCP Address:192.168.3.1~192.168.3.254 Default Gateway:192.168.3.1 Dns1: Dns2: Lease:

3) Routing

Routing

Type	Destination Address	Subnet Mask	Next-hop Address	Egress	Route Weight
/	/	/	/	/	/

PBR

Policy Name	Rules	Type	Next-hop Address
/	Protocol Type:/ Source IP Address:/ Destination IP Address:/ Source Port: Destination Port: Lease:/	/	/

4.2.2 WIRELESS

1) Wireless Management Mode

Managed Mode	Master Device	IP Range for AP
Managed by Ruijie Cloud Web	NAFK002DH0001	192.168.3.1/24

2) WIRELESS

SSID	Frequency Band	Encryption Method	Forward Mode	VLAN	IP Range
e-LightenCampusDemo3_Guest	2.4G/5G	wpa2-psk	bridge	64	192.168.64.1/24
e-LightenCampusDemo3_Staff	2.4G/5G	wpa2-psk	bridge	63	192.168.63.1/24
Telecom_Home	2.4G/5G	wpa2-psk	bridge	60	192.168.60.1/24
@Ruijie-m8886	2.4G/5G	open	bridge	1	192.168.3.1/24

4.2.3 Gateway Authentication

Portal Authention	Device	URL	Allowlist
Enabled	NAFK002DH0001/EG1510XS	portal-as.ruijienetworks.com	Server URL: Server IP: Local MAC: Local IP: